

WHAT IS CLAIMED IS

1. A light emitting device comprising:

an OLED;

means for measuring a current flowing between a first electrode and a
5 second electrode of the OLED;

means for comparing the measured current value and a reference current
value; and

means for correcting a voltage between the first electrode and the second
electrode of the OLED for making the value of the current flowing between the first
10 electrode and the second electrode of the OLED close to the reference current value
based on a difference between the measured current value and the reference current
value.

2. A device according to claim 1, wherein the measuring means, the comparing
15 means, and the correcting means are provided for each of corresponding colors of the
OLEDs.

3. A device according to claim 1, wherein a period during which the OLED
emits light is controlled with a digital video signal to display gradations.
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4. A device according to claim 1, wherein the comparing means comprises a
calculation circuit.

5. A light emitting device comprising:
25 a plurality of pixels each having an OLED;

means for measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels;

means for comparing the measured current value and a reference current
5 value; and

means for correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels
10 close to the reference current value based on a difference between the measured current value and the reference current value.

6. A device according to claim 5, wherein the measuring means, the comparing means, and the correcting means are provided for each of corresponding colors of the
15 OLEDs.

7. A device according to claim 5, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

20 8. A device according to claim 5, wherein the comparing means comprises a calculation circuit.

9. A light emitting device comprising:
a plurality of pixels each having an OLED;
25 means for measuring the total of a current flowing between a first electrode

and a second electrode of the OLEDs provided in at least two of the plurality of pixels;

means for comparing the measured current value and a reference current value; and

5 means for correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value based on a difference between the measured
10 current value and the reference current value,

wherein the voltage to be corrected is changed with a constant size every time when the difference between the measured current value and the reference current value is changed with a constant width.

15 10. A device according to claim 9, wherein the measuring means, the comparing means, and the correcting means are provided for each of corresponding colors of the OLEDs.

11. A device according to claim 9, wherein a period during which the OLED
20 emits light is controlled with a digital video signal to display gradations.

12. A device according to claim 9, wherein the comparing means comprises a calculation circuit.

25 13. A light emitting device comprising:

a plurality of pixels each having an OLED in a pixel portion;

means for measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels;

5 means for comparing the measured current value and a reference current value; and

means for correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value based on a difference between the measured current value and the reference current value,

wherein a specific image is displayed on the pixel portion when the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels is measured.

14. A device according to claim 13, wherein the measuring means, the comparing means, and the correcting means are provided for each of corresponding colors of the OLEDs.

15. A device according to claim 13, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

16. A device according to claim 13, wherein the comparing means comprises a calculation circuit.

17. A light emitting device comprising:

a plurality of pixels each having an OLED in a pixel portion;

means for measuring the total of a current flowing between a first electrode
and a second electrode of the OLEDs provided in at least two of the plurality of
5 pixels;

means for comparing the measured current value and a reference current
value;

means for correcting a voltage between the first electrode and the second
electrode of the OLEDs provided in the at least two of the plurality of pixels for
10 making the value of the total of the current flowing between the first electrode and the
second electrode of the OLEDs provided in the at least two of the plurality of pixels
close to the reference current value based on a difference between the measured
current value and the reference current value,

wherein the reference current value differs depending on an image
15 displayed on the pixel portion when the total of the current flowing between the first
electrode and the second electrode of the OLEDs provided in the at least two of the
plurality of pixels is measured.

18. A device according to claim 17, wherein the measuring means, the
20 comparing means, and the correcting means are provided for each of corresponding
colors of the OLEDs.

19. A device according to claim 17, wherein a period during which the OLED
emits light is controlled with a digital video signal to display gradations.

20. A device according to claim 17, wherein the comparing means comprises a calculation circuit.

21. A light emitting device comprising:

5 a plurality of pixels each having an OLED in a pixel portion, the pixel portion being provided with at least two of the plurality of pixels each having an OLED and at least one TFT, and the TFT controlling light emission of the OLED;
means for measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs;

10 means for comparing the measured current value and a reference current value; and

means for correcting a voltage between the first electrode and the second electrode of the OLEDs for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs close to the
15 reference current value based on a difference between the measured current value and the reference current value.

22. A device according to claim 21, wherein the measuring means, the comparing means, and the correcting means are provided for each of corresponding
20 colors of the OLEDs.

23. A device according to claim 21, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

25 24. A device according to claim 21, wherein the comparing means comprises a

calculation circuit.

25. A light emitting device comprising:

an OLED;

5 a variable power supply;

an ammeter for measuring a current flowing between a first electrode and
a second electrode of the OLED; and

a correction circuit for comparing the measured current value and a
reference current value and correcting a voltage between the first electrode and the
10 second electrode of the OLED for making the value of the current flowing between
the first electrode and the second electrode of the OLED close to the reference current
value by controlling the variable power supply.

26. A device according to claim 25, wherein the variable power supply, the
15 ammeter and the correction circuit are provided for each of corresponding colors of
the OLED.

27. A device according to claim 25, wherein a second substrate on which the
correction circuit or the ammeter is formed is attached onto a first substrate on which
20 the OLED is formed.

28. A device according to claim 25, wherein a second substrate on which the
correction circuit or the ammeter is formed is attached onto a first substrate on which
the OLED is formed by a COG method.

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29. A device according to claim 25, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed by a wire bonding method.

5 30. A device according to claim 25, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

31. A light emitting device comprising:

 a plurality of pixels each having an OLED;

10 an ammeter for measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels; and

 a correction circuit for comparing the measured current value and a reference current value and correcting a voltage between the first electrode and the
15 second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value by controlling a variable power supply.

20 32. A device according to claim 31, wherein the variable power supply, the ammeter and the correction circuit are provided for each of corresponding colors of the OLED.

33. A device according to claim 31, wherein a second substrate on which the
25 correction circuit or the ammeter is formed is attached onto a first substrate on which

the OLED is formed.

34. A device according to claim 31, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which
5 the OLED is formed by a COG method.

35. A device according to claim 31, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which
the OLED is formed by a wire bonding method.

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36. A device according to claim 31, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

37. A light emitting device comprising:

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a plurality of pixels each having an OLED;

an ammeter for measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels; and

a correction circuit for comparing the measured current value and a
20 reference current value and correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value by controlling a variable power supply,

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wherein the voltage to be corrected is changed with a constant size every

time when the difference between the measured current value and the reference current value is changed with a constant width.

38. A device according to claim 37, wherein the variable power supply, the
5 ammeter and the correction circuit are provided for each of corresponding colors of the OLED.

39. A device according to claim 37, wherein a second substrate on which the
correction circuit or the ammeter is formed is attached onto a first substrate on which
10 the OLED is formed.

40. A device according to claim 37, wherein a second substrate on which the
correction circuit or the ammeter is formed is attached onto a first substrate on which
the OLED is formed by a COG method.

41. A device according to claim 37, wherein a second substrate on which the
correction circuit or the ammeter is formed is attached onto a first substrate on which
the OLED is formed by a wire bonding method.

42. A device according to claim 37, wherein a period during which the OLED
emits light is controlled with a digital video signal to display gradations.

43. A light emitting device comprising:

a plurality of pixels each having an OLED in a pixel portion;

an ammeter for measuring the total of a current flowing between a first

electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels; and

a correction circuit for comparing the measured current value and a reference current value and correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value by controlling a variable power supply,

wherein a specific image is displayed on the pixel portion when the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels is measured.

44. A device according to claim 43, wherein the variable power supply, the ammeter and the correction circuit are provided for each of corresponding colors of the OLED.

45. A device according to claim 43, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed.

46. A device according to claim 43, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed by a COG method.

47. A device according to claim 43, wherein a second substrate on which the

correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed by a wire bonding method.

48. A device according to claim 43, wherein a period during which the OLED
5 emits light is controlled with a digital video signal to display gradations.

49. A light emitting device comprising:

a plurality of pixels each having an OLED in a pixel portion;

an ammeter for measuring the total of a current flowing between a first
10 electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels; and

a correction circuit for comparing the measured current value and a reference current value and correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels
15 for making the value of the total of the current flowing between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels close to the reference current value by controlling a variable power supply,

wherein the reference current value differs depending on an image displayed on the pixel portion when the total of the current flowing between the first
20 electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels is measured.

50. A device according to claim 49, wherein the variable power supply, the ammeter and the correction circuit are provided for each of corresponding colors of
25 the OLED.

51. A device according to claim 49, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed.

5 52. A device according to claim 49, wherein a second substrate on which the correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed by a COG method.

53. A device according to claim 49, wherein a second substrate on which the
10 correction circuit or the ammeter is formed is attached onto a first substrate on which the OLED is formed by a wire bonding method.

54. A device according to claim 49, wherein a period during which the OLED emits light is controlled with a digital video signal to display gradations.

15 55. A method for operating a light emitting device a plurality of pixels each having an OLED, comprising steps of:

measuring the total of a current flowing between a first electrode and a second electrode of the OLEDs provided in at least two of the plurality of pixels;

20 comparing the measured current value and a reference current value:
and

correcting a voltage between the first electrode and the second electrode of the OLEDs provided in the at least two of the plurality of pixels for making the value of the total of the current flowing between the first electrode and the second electrode
25 of the OLEDs provided in the at least two of the plurality of pixels close to the

reference current value based on a difference between the measured current value and the reference current value.

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